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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,581	08/19/2003	Fang-Chen Cheng	29250-001063/US	2943

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EXAMINER	
TSEGAYE, SABA	
ART UNIT	PAPER NUMBER
2419	
MAIL DATE	DELIVERY MODE
10/21/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/642,581	CHENG ET AL.	
	Examiner	Art Unit	
	SABA TSEGAYE	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-7,9-14,18 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 5-7, 9-14, 18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/19/08 has been entered.

2. Claims 1, 3, 5-7, 9-14, 18 and 20 pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 103

3. Claims 1, 3-14 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vayanos et al. (US 2002/0122400 A1) in view of Zeira et al. (US 2006/0098655 A1).

Regarding claims 1 and 11, Vayanos discloses a method for enhanced uplink data transmission, comprising:

independently generating a transport channel for each of a plurality of transmission modes, each transport channel having an associated transmission time interval (TTI) (0002; 0009; 0027), the plurality of transmission modes including a scheduled transmission mode (high priority data that requires QoS and scheduling) and an autonomous transmission mode (low priority data or best effort) (as shown in fig. 2 and 0030-0031, the subscriber unit 12 includes voice (high priority), signaling, E-mail (best effort) produces a separate data stream);

multiplexing the generated transport channels to form a composite transport channel, the formed composite channel having one TTI (0033), the TTIs associated with the independently generated transport channels (0029-0031, 0041); and

mapping the composite transport channel onto a physical channel (0033-0034).

Further, Vayanos discloses that a TTI boundary for one transport channel is also a boundary for all transport channels that have an equal or shorter TTI (0041). However, Vayanos doe not disclose that the composite transport channel being equal to the minimum TTI.

Zeira teaches that all transport channels are mapped to the CCTrCh on a TTI basis, using the smallest TTI within the CCTrCh (0005; 0007).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a minimum TTI, such as that suggested by Zeira, in the system of Vayanos in order to provide less processing delays at both transmitter and receiver units.

Regarding claim 3, Vayanos discloses the method wherein the independently generating step generates first and second transport channels having first and second TTIs, and the second TTI is a multiple of the First TTI (0033; 0037).

Regarding claim 5, Vayanos discloses the method wherein the first TTI is 2ms and the second TTI is 10ms (0040).

Regarding claim 6, Vayanos discloses the method wherein the generating step independently generates transport channels for more than one transmission mode (see fig. 2).

Regarding claim 7, Vayanos discloses the method wherein the TTI of each transmission mode is one of a sub-multiple and multiple of 10 ms (0040).

Regarding claim 8, Vayanos discloses the method wherein the independently generating step generates first and second transport channels having first and second TTIs, the transmission mode associated with the first transport channel is a scheduled transmission mode and the transmission mode associated with the second transport channel is an autonomous transmission mode (0030-0031).

Regarding claim 9, Vayanos discloses the method wherein the first TYI is 2ms and the second TTI is 10ms (0040).

Regarding claim 10, Vayanos discloses the method wherein the mapping step maps the composite transport channel onto the physical channel based on the TTI of the formed composite channel (0034).

Regarding claim 12, Vayanos discloses the method of wireless uplink communication comprising: mapping at least two transport channels within a physical channel (0034), the at least two transport channels including a first transport channel for a scheduled transmission mode (high priority data that requires QoS and scheduling), and a second transport channel for an autonomous transmission mode (low priority) (as shown in fig. 2 and 0030-0031, the subscriber unit 12 includes voice (high priority), signaling, E-mail (best effort) produces a

separate data stream) each transport channel having an associated transmission time interval (TTI);

multiplexing the at least tow transport channels to form a composite transport channel, the formed composite channel having one TTI (0033), the TTIs associated with the independently generated transport channels (0029-0031, 0041), the TTIs associated with the at lest two transport channels (0029-0031, 0041).

Further, Vayanos discloses that a TTI boundary for one transport channel is also a boundary for all transport channels that have an equal or shorter TTI (0041). However, Vayanos doe not disclose that the composite transport channel being equal to the minimum TTI.

Zeira teaches that all transport channels are mapped to the CCTrCh on a TTI basis, using the smallest TTI within the CCTrCh (0005; 0007).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a minimum TTI, such as that suggested by Zeira, in the system of Vayanos in order to provide less processing delays at both transmitter and receiver units.

Regarding claim 13, Vayanos discloses the method wherein each of the transport channels has a distinct transmission time interval ("TTI") associated thereto (0002, 0037).

Regarding claim 14, Vayanos discloses the method wherein the two transport channels are generated for each transmission mode (see fig. 2).

Regarding claim 18, Vayanos discloses the method wherein the transport channels are generated by generating at least a first and a second transport channel having first and second TTIs, and the second TTI is a multiple of the first TTI (0033).

Regarding claim 20, Vayanos discloses the method wherein the step of mapping maps the composite transport channel onto the physical channel based on the TTI of the formed composite channel (0034).

Response to Arguments

4. Applicant's arguments with respect to claims1, 3, 5-7, 9-14, 18 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Vayanos fails to teach *"independently generating a transport channel for each of a plurality of transmission modes that includes a scheduled transmission mode and an autonomous transmission mode, as claim 1 requires."* Examiner respectfully disagrees with Applicant contention. Vayanos discloses a priority scheme (*in **W-CDMA** cellular communication system*) that a plurality of applications provides a plurality of data streams to be allocated to a single stream for transmission based on a plurality of transmission mode. As shown in fig. 2, subscriber unit produces a separate data stream with different priorities such as voice and E-mail. Transmitting high priority data (voice) required **QoS and scheduling** or larger overhead from signaling can be tolerated (a time and rate scheduled transmission mode). Low priority data (e-mail) required low signaling overhead (autonomous transmission mode).

Furthermore, as discloses in background of the instant invention, two types of mode for scheduling UE transmissions are envisioned by **CDMA2000 standards**; a scheduled transmission mode is a time and rate scheduled mode and the autonomous mode is called a rate control scheduling mode.

Regrinding claims 11 and 12 contain limitations similar to those in claim 1; therefore, Examiner takes the same position.

Regarding claims 3, 5-7, 9-10, 13m 14, 18 and 20 are dependent upon claims 1 and 12, which the Examiner believes are obvious by Vayanos in view of Zeira as set forth in the above rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SABA TSEGAYE whose telephone number is (571)272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing Chan can be reached on (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saba Tsegaye
Examiner
Art Unit 2419

/S. T./
Examiner, Art Unit 2419

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2619
10/13/08